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### Education

1996	MSc	Physics	Leiden University, the Netherlands
2001	PhD (Cum laude)	Physics (Dr. Jan Schmidt)	Leiden University, the Netherlands

### Postdoctoral Training

2001-2004	Postdoctoral Research Fellow	Chemistry and Chemical Biology (Dr. X. Sunney Xie)	Harvard University
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### Faculty Academic Appointments

2004-2010	Assistant Professor	Biological Chemistry and Molecular Pharmacology	Harvard Medical School
2010-present	Full Professor	Zernike Institute for Advanced Materials	Groningen University

### Other Professional Positions

2008-present	Scientific Advisory Board	Ion Torrent Systems
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### Committee Service

#### Groningen University (2010-present)

2010-present	Director of "Physics for Life and Health" Bachelor's curriculum
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#### Harvard Medical School (2004-2010)

##### Graduate Program Executive Committees:

2008-2010	Standing Committee on Higher Degrees in Biophysics
2008-2010	Faculty Council Biological and Biomedical Sciences (BBS)

##### Graduate Program Admission Committees:

2006	Biophysics
2006	Systems Biology
2007-2009	MD/PhD Harvard-MIT Health Sciences and Technology
2007-2009	Biological and Biomedical Sciences

##### Thesis Examining Committees:

2004	David Miyamoto	BBS (advisor: Tim Mitchison)
2006	Alina Vrabioiu	BBS (advisor: Tim Mitchison)
2007	Conor Evans	Chemistry and Chemical Biology (advisor: X. Sunney Xie)
2008	Amy Wong	Biophysics (advisor: George Whitesides)
2008	Zeba Wunderlich	Biophysics (advisor: Leonid Mirny)

*Thesis Advisory Committees:*

2005-2007	Conor Evans	Chemistry and Chemical Biology (advisor: X. Sunney Xie)
2007-2008	Amy Wong	Biophysics (advisor: George Whitesides)
2007-2010	Marco Morelli	Virology (advisor: Stephen Harrison)
2007-2010	Simon Trevino	BBS (advisor: Jack Szostak)
2007-2010	Timothy Blosser	Biophysics (advisor: Xiaowei Zhuang)
2007-2010	Sangjin Kim	Chemistry and Chemical Biology (advisor: X. Sunney Xie)
2007-2010	Rou-Jia Sung	Chemistry and Chemical Biology (advisor: Greg Verdine)
2008-2010	Shariya Terrell	Virology (advisor: Donald Coen)

*Qualifying Proposal Examining Committees:*

2004	Lucas Nivon	Biophysics
2005	Nina Ilic	BBS
2005	Timothy Blosser	Biophysics
2006	Sangjin Kim	Chemistry and Chemical Biology
2006	Jake Wintermute	Systems Biology
2006	Katie Edmond	Biophysics
2007	Rou-Jia Sung	Molecular and Cellular Biology
2007	Joe Markson	Biophysics
2008	Rui Zhen Tan	Biophysics
2008	Giorgio Gaglia	Systems Biology

*University Committee Service:*

2004-2010	Member of Harvard University graduate programs Biological and Biomedical Sciences (BBS), Biophysics, Virology, and Systems Biology
2005-2007	Host weekly departmental pizza talk
2005-2009	BCMP departmental retreat committee
2006-2009	Harvard College Board of Tutors in the Biochemical Sciences
2006-2009	Harvard Medical School Postdoctoral Advisory Committee
2007	Infectious Diseases Institute/BCMP junior faculty search committee
2007-2009	Nikon Imaging Center overseeing committee

**Regional:**

2004-2008	Organizer Single-Molecule Discussion Club (monthly seminar series by and for single-molecule biophysicists from Harvard, MIT, Boston University, Boston College, Tufts U., Northeastern U., Brown U.)
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**Professional Societies**

2001-present	Biophysical Society, member
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**Grant Review Activities**

2006	Biophysics Fellowship Study Section ZRG1 F04B, Ad hoc member	NIH
2006	Microbial Genetics Review Panel 1156, Ad hoc member	NSF
2008-2009	Molecular Genetics A Study Section, Ad hoc member	NIH
2008	Molecular Genetics C Study Section, Ad hoc member	NIH

## Editorial Activities

### *Ad hoc Reviewer*

Science, Nature, Cell, Nature Structural Molecular Biology, EMBO Journal, PNAS, Molecular Cell, Biophysical Journal, JACS, ACS Nano, Physical Review Letters, Molecular BioSystems, Rev. Sci. Instruments, Langmuir, Journal of Microscopy, Bioinformatics, Microscopy Research and Technique.

### *Other Editorial Roles*

2008-present	Advisory Board, member	Molecular BioSystems
2008	Guest editor	Proc. Natl. Acad. Sciences USA

## Honors and Prizes

2001	Postdoctoral fellowship	Niels Stensen Foundation, the Netherlands
2001	Postdoctoral fellowship (declined)	Netherlands Organization for Scientific Research
2002	Long-term postdoctoral fellowship	Human Frontier Science Program
2002	C.J. Kok award for best doctoral thesis in sciences	Leiden University, the Netherlands
2005	Armenise-Harvard Junior Faculty Award	Giovanni Armenise-Harvard Foundation
2005	Searle Scholar	Kinship Foundation
2006	CAREER Award	National Science Foundation
2007	Research Scholar Award	American Cancer Society

## Report of Funded and Unfunded Projects

### Funding Information

#### *University of Groningen*

##### *Current*

2010–2012	PI	NIH	€ 240,000
		R01 GM077248-01	

##### *Single-molecule enzymology of the replisome*

The major goal of this project is to develop and use single-molecule tools to study the orchestration of the different enzymatic activities at the prokaryotic replication fork.

##### *Past*

#### *Harvard Medical School*

##### *Past*

2006–2010	PI	NSF	\$ 355,000 direct
		CAREER Award MCB-0543784	

##### *Under the hood of the replisome: single-molecule mechanics of DNA replication*

The major goal of this project is to study the molecular mechanisms underlying the activity of prokaryotic replicative helicase, primase, and DNA polymerase using single-molecule approaches.

2007–2009	PI	NIH	\$ 260,000 direct
		R21 AI072346-01	

##### *Single-particle fluorescence studies of viral fusion*

The major goal of this project is to develop a fluorescence-based assay to study viral membrane fusion at the single-particle level.

2007–2010	PI	NIH	\$ 950,000 direct
		R01 GM077248-01	

##### *Single-molecule enzymology of the replisome*

The major goal of this project is to develop and use single-molecule tools to study the orchestration of the different enzymatic activities at the prokaryotic replication fork.

2008-2012 PI American Cancer Society \$ 750,000 direct  
RSG-08-234-01-GMC

*A single-molecule view of eukaryotic DNA replication*

Single-molecule fluorescence imaging tools are developed and used to study the kinetics of replication initiation and fork elongation in *Xenopus* cell-free extracts.

2005–2008 PI Kinship Foundation \$ 240,000 direct  
Searle Scholars Grant 05-L-104

*Eukaryotic DNA replication studied at the single-molecule level*

The major goal of this project was to develop the tools to study the dynamics of individual DNA replication Reactions in *Xenopus* egg extracts.

2005–2007 PI The Giovanni Armenise-Harvard Foundation \$ 100,000 direct

*The unwinding mystery of the eukaryotic replicative helicase: A single-molecule study*

The major goal of this project was to study the mechanisms of DNA unwinding by the eukaryotic replicative helicase, the MCM2-7 complex.

## **Report of Local Teaching and Training**

### **Groningen University (2010-present)**

#### **Teaching of Students in Courses**

##### **Formally Supervised Trainees**

Postdoctoral research fellows:

2010-present Nathan Tanner, PhD

Graduate thesis advisees:

2010-present Hylkje Geertsema

2010-present Jason Otterstrom (Harvard Biophysics program)

### **Harvard University (2001-2010)**

#### **Teaching of Students in Courses**

2002	Harvard U., Dept. of Chem. and Chem. Biol. Advanced undergraduate	Guest Instructor	Chem162: <i>Molecular Spectroscopy</i> 1.5 contact hours
2003	Harvard College Undergraduate	Head Teaching Fellow	QR46: <i>The Visual Display of Quant. Inf.</i> 36 contact hours
2003, '06, '08	Harvard U., Dept. of Chem. and Chem. Biol. Advanced undergraduate	Guest Instructor	Chem163: <i>Frontiers in Biophysics</i> 1.5 contact hours/year
2003-2007	Harvard U., Dept. of Chem. and Chem. Biol. Undergraduate	Guest Instructor	Freshman Seminar 22e: <i>Mol. Motors and pumps</i> 1.5 contact hours/year
2004–present	Harvard Medical School Graduate	Gst. Instr., Disc. Ldr.	BCMP200: <i>Molecular Biology</i> 2 contact hours/year
2005–2007	Harvard Medical School Graduate	Guest Instructor	BCMP201: <i>Proteins: Struct., function, and cat.</i> 1.5 contact hours/year

2006	Harvard Medical School Graduate	Course Dir., Instructor	Nanocourse on <i>Single-Molecule Biophysics</i> 3 contact hours
2006	Harvard Medical School Graduate	Course Dir., Instructor	BCMP232: <i>Physical Principles in Biology</i> 24 contact hours
2007	Harvard Medical School Graduate	Instructor	Biophysics 242r: <i>Molecular Motors</i> 15 contact hours
2007–2008	Mass. Inst. of Techn., Dept. of Chemistry Undergraduate	Guest Instructor	7.08j: <i>Biological Chemistry II</i> 1.5 contact hours/year
2008	Brandeis University, Dept. of Biochemistry Undergraduate	Guest Instructor	BCHM 103B: <i>Advanced Biochemistry</i> 1.5 contact hours
2008–present	Harvard Medical School Graduate	Course Director	BCMP201: <i>Proteins: Struct., function, and cat.</i> 36 contact hours/year
2008	Harvard Medical School Graduate	Instructor	Nanocourse on <i>Chromosome duplication</i> 3 contact hours

### Formally Supervised Trainees

Postdoctoral research fellows:

2009-present	Arek Kulczyk, PhD	
2008-present	Hasan Yardimic, PhD	
2007-2010	Joe Loparo, PhD	Asstnt Professor at Harvard Medical School, USA
2005-2009	Samir Hamdan, PhD	Asstnt Professor at KAUST, Saudi Arabia
2005-2008	Satoshi Habuchi, PhD	Asstnt Professor at Tokyo Institute of Technology, Japan
2004-2007	Jong-Bong Lee, PhD	Asstnt Professor at Pohang U. of Sc. and Techn., S.Korea

Graduate thesis advisees:

2008-2010	Peter Stark (Biophysics)
2008-present	Irene Kim (Virology; co-advised with Stephen Harrison and Sean Whelan)
2008-present	Jason Otterstrom (Biophysics)
2007-2010	Anahita Tafvizi (Physics; co-advised with Leonid Mirny), Graduated April 2010
2007-present	Jason Leith (Biophysics; co-advised with Leonid Mirny)
2006-present	Anna Kochaniak (Biophysics)
2006-2010	Nathan Tanner (BBS), Graduated February 2010
2005-2010	Mark Elenko (BBS; co-advised with Jack Szostak), Graduated April 2010
2005-present	Candice Etson (Biophysics)
2004-2010	Daniel Floyd (BBS; co-advised with Stephen Harrison), Graduated April 2010

Rotation Students:

2008	Jason Otterstrom (Biophysics)
2007	Anahita Tafvizi (Physics), Jason Leith (Biophysics)
2006	Meghan Thurlow (Chemistry and Chemical Biology), Nathan Tanner (BBS), Cindy Jao (Chemical Biology), Irene Kim (Virology), Anna Kochaniak (Biophysics)
2005	Dale Muzzey (Biophysics), Richard Hite (BBS), Candice Etson (Biophysics)
2004	Daniel Floyd (BBS)

Exchange students:

2007	Zhuangxiong Huang	Delft University of Technology, the Netherlands
2009	Rutger Rozendaal	Delft University of Technology, the Netherlands
2009	Joris Goudsmits	Eindhoven University of Technology, the Netherlands

## Report of Regional, National and International Presentations

## **University of Groningen (2010-present)**

### *National (the Netherlands)*

- 2010 Invited lecturer, Research seminar, Delft University, Dept. of Bionanoscience  
Invited lecturer, Research seminar, Groningen University, Dept. of Physics  
Invited lecturer, Lorentz Workshop “Seeing Proteins in Action”, Leiden  
Invited lecturer, Annual Dutch Meeting on Molecular and Cellular Biophysics

### *International (outside the Netherlands)*

- 2010 Invited lecturer, American Physical Society Meeting (Portland, OR, USA)  
Invited lecturer, Mathematical Biosciences Institute “DNA-Protein Interactions” (Columbus, OH, USA)  
Invited lecturer, Single-Molecule Workshop, Brookhaven National Laboratory (Brookhaven, NY, USA)  
Invited lecturer, Evolving DNA Polymerases (Ascona, Switzerland)  
Invited lecturer, Research seminar, University of Munich, Dept. of Physical Chemistry (Munich, Germany)
- 2011 Invited lecturer, DPG School on “Single-Molecule Spectroscopy” (Bad Honnef, Germany)  
Invited lecturer, Keystone Meeting on Replication and Recombination (Keystone, CO, USA)

## **Harvard University (2003-2009)**

### *National (U.S.A.)*

- 2003 Invited lecturer, Research Seminar, Harvard Medical School (Boston, MA), Dept. of BCMP  
Contributing speaker, Biophysical Society Meeting (San Antonio, TX)
- 2004 Contributing speaker, Biophysical Society Meeting (Baltimore, MD)
- 2005 Invited lecturer, Research Seminar, Brandeis University (Waltham, MA), Dept. of Biochemistry  
Contributing speaker, Single-Molecule Biophysics (Aspen, CO)
- 2006 Invited lecturer, Research Seminar, University of Vermont (Burlington, VT), Dept. of Mol. Physiol. & Bioph.  
Invited lecturer, American Society for Cell Biology, Annual Meeting (San Diego, CA)  
Invited lecturer, Nature Chemical Biology Symposium (Boston, MA)  
Invited lecturer, Research Seminar, University of Colorado (Boulder, CO), Dept. of Physics  
Invited lecturer, Research Seminar, University of Puerto Rico (San Juan, PR), Dept. of Chemistry  
Invited lecturer, Molecular Biophysics Seminar, Rutgers University (New Brunswick, NJ)  
Invited lecturer, 7<sup>th</sup> Carolina Biophysics Symposium (Chapel Hill, NC)  
Invited lecturer, Gordon Research Conference on Nucleic Acids (Newport, RI)  
Contributing speaker, Gordon Research Conference on Single-Molecule Biology (New London, VT)  
Contributing speaker, session chair, Biophysical Society Meeting (Salt Lake City, UT)  
Invited lecturer, Research Seminar, Kavli Institute for Theoretical Physics (Santa Barbara, CA)  
Invited lecturer, Research Seminar, Northeastern University (Boston, MA), Dept. of Physics  
Invited lecturer, Research Seminar, Bowling Green State U. (Bowling Green, OH), Dept. of Chemistry
- 2007 Invited lecturer, Research Seminar, Cold Spring Harbor Laboratories (Cold Spring Harbor, NY)  
Invited lecturer, Research Seminar, U. North Carolina, Chapel Hill, Dept. of Microbiology  
Invited lecturer, Research Seminar, U. Conn. Health Ctr. (Farmington, CT), Ctr. for Cell Analysis & Modeling  
Invited lecturer, Research Seminar, Tufts University (Medford, MA), Dept. of Biology  
Invited lecturer, Research Seminar, Johns Hopkins U. (Baltimore, MD), Dept. of Biophys. Chemistry  
Invited faculty chalk talk, Harvard University (Cambridge, MA), Dept. of Mol. and Cell. Biology  
Invited lecturer, Research Seminar, Columbia U. (New York, NY), Dept. of Biochem. and Mol. Biophysics  
Invited lecturer, Research Seminar, MIT (Cambridge, MA), Dept. of Chemistry  
Invited lecturer, Research Seminar, Memorial Sloan-Kettering Cancer Center (New York, NY)  
Invited lecturer, American Chemical Society National Meeting (Boston, MA)
- 2008 Invited lecturer, Single-Molecule Symposium at Maryland (College Park, MD)  
Invited lecturer, Research Seminar, U. of Massachusetts, Amherst, Dept. of Microbiology  
Invited lecturer, Research Seminar, Vanderbilt University (Nashville, TN), Inst. of Chemical Biology  
Invited lecturer, Research Seminar, Wayne State University (Detroit, MI), Dept. of Chemistry  
Invited lecturer, Workshop on Site-Specific Recombination and Transposition (Woods Hole, MA)

- Invited lecturer, Research Seminar, Mount Sinai School of Medicine (New York, NY)
- Invited lecturer, Gordon Research Conference on Single-Molecule Biology (New London, VT)
- Invited lecturer, Gordon Research Conference on Nucleic Acids (Newport, RI)
- Invited lecturer, Biophysical Society Meeting (Long Beach, CA)
- Invited lecturer, Am. Soc. for Biochem. and Mol. Biol. National Meeting (San Diego, CA)
- Invited lecturer, Keystone Meeting on Replication and Recombination (Santa Fe, NM)
- Invited lecturer, Research Seminar, Duke University (Durham, NC), Dept. of Biochemistry
- Invited lecturer, Research Seminar, University of California, Irvine, Dept. of Chemistry
- 2009 Invited lecturer, Research Seminar, NYU School of Medicine, Skirball Institute (New York, NY)
- Invited lecturer, Research Seminar, U. of Illinois, Urbana-Champaign, Dept. of Physics (U.-Ch., IL)
- Invited lecturer, NIH NIGMS 23<sup>rd</sup> Annual AIDS Meeting (Bethesda, MD)
- Invited lecturer, Research Seminar, MIT, Molecular Biophysics (Cambridge, MA)
- Invited lecturer, Research Seminar, Emmanuel College, Monthly Science Seminar (Boston, MA)
- Invited lecturer, Research Seminar, U. of Michigan, Ann Arbor, Dept. of Chemistry

*International (outside U.S.A.)*

- 2003 Invited lecturer, Research seminar, University of Delft (Delft, the Netherlands), Dept. of Physics  
Contributing speaker, Nanoscale optics of single quantum systems and biomolecules,  
Royal Academy of Sciences (Amsterdam, the Netherlands)
- 2004 Invited lecturer, Research Seminar, University of Leuven (Leuven, Belgium), Dept. of Chemistry  
Invited lecturer, 6<sup>th</sup> Annual Linz Winter Workshop (Linz, Austria)  
Invited lecturer, Research seminar, University of Bayreuth (Bayreuth, Germany), Dept. of Physics
- 2005 Invited lecturer, Belgium Royal Academy of Sciences (Brussels, Belgium)  
Invited lecturer, session chair, NanoTech Insight '05 (Luxor, Egypt)
- 2006 Invited lecturer, Single-Molecule Biology (Cambridge, UK)
- 2007 Invited lecturer, IX Annual Linz Winter Workshop on Single-molecule research (Linz, Austria)  
Invited lecturer, International Symposium on Biomolecular Nanoscale Assemblies (Copenhagen, Denmark)  
Invited lecturer, Int. Symposium of Institute for Molecules and Materials (Nijmegen, the Netherlands)  
Invited lecturer, Casimir Research School (Eindhoven, the Netherlands)
- 2008 Invited lecturer, EMBO Conference on Chromosome Replication and Segregation (Geilo, Norway)
- 2009 Invited lecturer, Fragrant Hill Conference on Single-Molecule Detection (Beijing, China)  
Invited lecturer, NVBMB Spring Symposium Netherland Cancer Institute (Amsterdam, Netherlands)  
Invited lecturer, Research Seminar, University of Leiden, Physics Dept. (Leiden, Netherlands)  
Invited lecturer, Research Seminar, U. of Groningen, Vlieland retreat Zernike Institute (Vlieland, Netherlands)

## **Report of Technological and Other Scientific Innovations**

A.M. van Oijen and D.L. Floyd

‘Compounds and methods for assaying fusion of an individual, enveloped virus with target membrane’  
Unites States patent filed 2008; application nr. 20090017449

J.M. Rothberg, J.H. Leamon, J.F. Davidson, A.M. van Oijen, W. Hinz, M. Davey, B. Hann, J. Schultz

‘Methods for sequencing individual nucleic acids under tension’  
International patent filed 2009; application nr. PCT/US2009/004546

## **Report of Scholarship**

### **Publications**

#### ***Peer Reviewed Publications***

- D.L. Floyd, S.C. Harrison, A.M. van Oijen  
Analysis of kinetic intermediates in single-particle dwell-time distributions  
**Biophys. Jnl.**, 2010; accepted
- A.K. Satapathy, A.B. Kochaniak, S. Mukherjee, D.J. Crampton, A.M. van Oijen, C.C.R. Richardson  
Residues in the Central  $\beta$ -hairpin of the DNA Helicase of Bacteriophage T7 are Important in DNA Unwinding  
**Proc. Natl. Acad. Sci. USA**, 2010; accepted
- A.M. van Oijen, J.J. Loparo  
Single-molecule studies of the replisome  
**Annu. Rev. Biophysics**, 2010; in press
- N.A. Tanner, A.M. van Oijen  
Visualizing DNA replication at the single-molecule level  
**Methods in Enzymology**, 2010; in press
- S.M. Hamdan, A.M. van Oijen  
Timing, coordination, and rhythm: Acrobatics at the DNA replication fork  
**Jrnl. of Biological Chemistry**, 2010; in press
- C.M. Etson, S.M. Hamdan, C.C. Richardson, A.M. van Oijen  
Thioredoxin suppresses microscopic hopping of T7 DNA polymerase on duplex DNA  
**Proc. Natl. Acad. Sci. USA**, 2010; 107: 1900-1905
- S.M. Hamdan, J.J. Loparo, M. Takahashi, C.C. Richardson, A.M. van Oijen  
Dynamics of individual DNA replication loops reveal temporal control of lagging-strand synthesis  
**Nature**, 2009; 457: 336-339
- M. Elenko, J.W. Szostak, A.M. van Oijen  
Single-molecule imaging of an in vitro-evolved RNA aptamer reveals homogeneous ligand binding kinetics  
**Jrnl. of the American Chemical Society**, 2009; 131: 9866-9867
- A.B. Kochaniak, S. Habuchi, J.J. Loparo, D.J. Chang, K.A. Cimprich, J.C. Walter, A.M. van Oijen  
Proliferating cell nuclear antigen uses two distinct modes to move along the DNA  
**Jrnl. of Biological Chemistry**, 2009; 284: 17700-17710
- D.L. Floyd, S.C. Harrison, A.M. van Oijen  
Method for measurement of viral fusion kinetics at the single-particle level  
**Jrnl. of Vis. Exp.**, 2009; 31: 1484
- N.A. Tanner, J.J. Loparo, A.M. van Oijen  
Visualizing single-molecule DNA replication with fluorescence microscopy  
**Jrnl. of Vis. Exp.**, 2009; 32: 1529
- N.A. Tanner, J.J. Loparo, S.M. Hamdan, S. Jergic, N.E. Dixon, A.M. van Oijen  
Real-time single-molecule observation of rolling-circle DNA replication  
**Nucleic Acids Research**, 2009; 37: e27
- S. Habuchi, H. Tsutui, A.B. Kochaniak, A. Miyawaki, A.M. van Oijen  
mKikGR, a monomeric photoswitchable fluorescent protein  
**PLoS One**, 2008; 3: e3944

A.M. van Oijen

Cutting down the forest to see a single tree?

**Nature Chemical Biology**, 2008; 4: 440-443

D.L. Floyd, J. Ragains, J.J. Skehel, S.C. Harrison, A.M. van Oijen

Single-particle kinetics of influenza membrane fusion

**Proc. Natl. Acad. Sci. USA**, 2008; 105: 15382-15387

G. Komazin-Meredith, R. Mirchev, P.W. Yacono, D.E. Golan, A.M. van Oijen, D.M. Coen

Hopping of a Processivity Factor on DNA Revealed by Single-Molecule Assays of Diffusion

**Proc. Natl. Acad. Sci. USA**, 2008; 105: 10721-10726

A. Tafvizi, F. Huang, J.S. Leith, A.R. Fersht, L.A. Mirny, A.M. van Oijen

Tumor suppressor p53 slides on DNA with low friction and high stability

**Biophysical Journal**, 2008; 95: L01-03

N.A. Tanner, S.M. Hamdan, J. Slobodan, P.M. Schaeffer, N.E. Dixon, A.M. van Oijen

Single-molecule studies of fork dynamics in Escherichia coli DNA replication

**Nature Structure & Molecular Biology**, 2008; 15: 170-175

S. Fujiyoshi, M. Fujiwara, C. Kim, M. Matsushita, A.M. van Oijen, J. Schmidt

A single-component reflecting objective for low-temperature spectroscopy in the entire visible region

**Applied Physics Letters**, 2007; 91: 051125/1-051125/3

A.M. van Oijen

Single-molecule studies of complex systems: The replisome

**Molecular BioSystems**, 2007; 3: 117-125

A.M. van Oijen

Honey, I shrunk the DNA: DNA length as a probe for nucleic-acid enzyme activity

**Biopolymers**, 2007; 85: 144-153

S.M. Hamdan, D.E. Johnson, N.A. Tanner, J.-B. Lee, U. Qimron, S. Tabor, A.M. van Oijen, C.C. Richardson

Dynamic DNA Helicase-DNA Polymerase Interactions Assure Processive Replication Fork Movement

**Molecular Cell**, 2007; 27: 539-549

P.C. Blainey, A.M. van Oijen, A. Banerjee, G.L. Verdine, X.S. Xie

A base-excision DNA-repair protein searches for intrahelical lesions by fast sliding along DNA

**Proc. Natl. Acad. Sci. USA**, 2006; 103: 5752-5757

J.B. Lee, R.K. Hite, S.M. Hamdan, X.S. Xie, C.C. Richardson, A.M. van Oijen

DNA primase acts as a molecular brake in DNA replication

**Nature**, 2006; 439: 621-4

B.P. English, W. Min, A.M. van Oijen, K.T. Lee, G. Luo, H. Sun, B.J. Cherayil, S.C. Kou, X.S. Xie

Ever-Fluctuating Single Enzyme Molecules: the Michaelis-Menten Equation Revisited

**Nature Chemical Biology**, 2006; 2: 87-94

Marcelo Ehrlich, Werner Boll, Antoine van Oijen, Ramesh Hariharan, Kartik Chandran, Max L. Nibert, Tomas Kirchhausen

Endocytosis by Random Initiation and Stabilization of Clathrin-Coated Pits

**Cell**, 2004; 118: 591-605

A.M. van Oijen, P.C. Blainey, D.J. Crampton, C.C. Richardson, T. Ellenberger, X.S. Xie  
Single-molecule kinetics reveal base dependence and dynamic disorder of lambda exonuclease  
**Science**, 2003; 301: 1235-1238

R. Verberk, A.M. van Oijen, M. Orrit  
A simple model for the power-law blinking of single semiconductor nanocrystals  
**Phys. Rev. B**, 2002; 66: 233202/1-233202/4

A.M. van Oijen, R. Verberk, Y. Durand, J. Schmidt, J.N.J. van Lingen, A.A. Bol, A. Meijerink  
Continuous-wave two-photon excitation of individual CdS nanocrystallites  
**Appl. Phys. Lett.**, 2001; 79: 830-832

J. Köhler, A.M. van Oijen, M. Ketelaars, C. Hofmann, M. Matsushita, T.J. Aartsma, J. Schmidt  
Optical spectroscopy of individual photosynthetic pigment protein complexes  
**International Journal of Modern Physics B**, 2001; 15: 3633-3636

M. Matsushita, M. Ketelaars, A.M. van Oijen, J. Köhler, T.J. Aartsma, J. Schmidt  
Spectroscopy on the B850 band of individual light-harvesting 2 complexes of *Rhodospseudomonas acidophila*; II. Exciton states of an elliptically deformed ring aggregate  
**Biophys. J.**, 2001; 80: 1604-1614

M. Ketelaars, A.M. van Oijen, M. Matsushita, J. Köhler, J. Schmidt, T.J. Aartsma  
Spectroscopy on the B850 band of individual light-harvesting 2 complexes of *Rhodospseudomonas acidophila*; I. Experiments and Monte-Carlo simulations  
**Biophys. J.**, 2001; 80: 1591-1603

Y. Durand, A. Bloëß, A.M. van Oijen, E.J.J. Groenen, J. Schmidt  
*Pentacene: a suitable molecule to investigate the Sphol'skii effect at a molecular level?*  
**Chem. Phys. Lett.**, 2000; 317: 232-237

A.M. van Oijen, M. Ketelaars, J. Köhler, T.J. Aartsma, J. Schmidt  
*Spectroscopy of individual LH2 complexes of Rhodospseudomonas acidophila: diagonal disorder, sample heterogeneity, spectral diffusion and energy transfer in the B 800 band*  
**Biophys. J.**, 2000; 78: 1570-1577

A.M. van Oijen, M. Ketelaars, J. Köhler, T.J. Aartsma, J. Schmidt  
*Spectroscopy of individual LH2 complexes of Rhodospseudomonas acidophila: Localized excitations in the B800 band*  
**Chem. Phys.**, 1999; 247: 53-60

A.M. van Oijen, M. Ketelaars, J. Köhler, T.J. Aartsma, J. Schmidt  
*Unraveling the electronic structure of individual photosynthetic pigment-protein complexes*  
**Science**, 1999; 285: 400-402

A.C.J. Brouwer, J. Köhler, A.M. van Oijen, E.J.J. Groenen, J. Schmidt  
*Single-molecule fluorescence autocorrelation experiments on pentacene. The dependence of intersystem crossing on isotopic composition*  
**J. Chem. Phys.**, 1999; 110: 9151-9159

A.M. van Oijen, J. Köhler, J. Schmidt, M. Müller, G.J. Brakenhoff  
Far-field fluorescence microscopy beyond the diffraction limit  
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